

A GYNANDROMORPHOUS MUTILLID FROM
MONTANA.¹

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In July, 1912, while collecting in the Elkhorn mountains near Townsend, Montana, I found a Mutillid which presents a peculiar type of gynandromorphism. The specimen was taken with several others of the same species, which Mr. Rohwer has determined as *Dasymutilla euchroa* Cockerell. The female of this species has the body very thickly covered with long bright red hairs. The male also has these hairs on the greater part of the thorax and abdomen, and on the occipital region of the head, but the sides of the head, the epinotum, and the anterior two-thirds of the first gastric segment bear only black hairs, which are more sparse than the red ones and allow the black color of the integument to show through.

Only two gynandromorphous Mutillids have been recorded. One of these, *Mutilla europæa* L. var. *obscura* Nyl., according to Wheeler (PSYCHE, Vol. XVII, 1910, p. 89), was divided laterally, the right side being female, the left male. The other example, *Pseudomethoca canadensis* Blake, which Wheeler found at Colebrook, Conn., differed in having the sexes of the two sides reversed, the female to the left. Both of these were complete, having well developed wings on the male side and even the legs of either side characteristic of the respective sex. The specimen before me is incompletely differentiated. The male side lacks wings, and all of the legs are typically male. It differs also in being a crossed or decussated gynandromorph. The head is male to the right and female to the left, while the thorax and abdomen are male to the left and female to the right. The body of *D. euchroa* is so densely covered with hairs that it is impossible clearly to make out the thoracic sutures or the sculpture. The accompanying figures will give an idea of the general outline of the body from above and the head from the front. The black parts of the insect are shaded in the figures.

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The right (male) side of the head is much shorter than the left. The right eye is larger than the other, the antennæ long and 13-jointed and the mandible short, with three teeth toward the apex. The median ocellus is perfect, though somewhat smaller than in an ordinary male. There is one lateral ocellus on the male side. On the female side the head is longer, the antennæ are shorter and 12-jointed, the eye small, located a little farther back than the other, and the mandible is much longer and more slender, with a

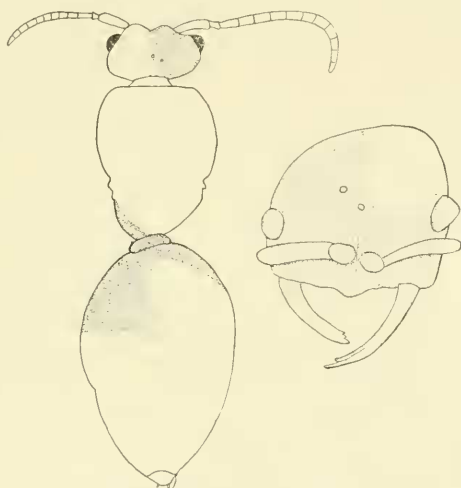


Fig. 1. *Dasyutilla euchroa* Ckll., gynandromorph.

single sub-apical tooth. The pilosity of the head is black, except for spaces on the left of the occiput and front and a few scattered red hairs on the occiput to the right of the median line (the latter characteristic of the male). The clypeus, antennæ and both mandibles are black.

Each side of the thorax is not so evidently distinct from the other as in the head, because in both sexes occurs the heavy covering of red hairs. In general shape it is asymmetrical, the epinotum is more rounded on the left side and is black along the margin. The petiole is male to the left and female to the right, and is peculiarly twisted. The differences between the sides of the abdomen are more apparent. The large black spot on the left half of the first segment is typical of the male. There is a strong constriction

on this side between the first and second segments. The apical segment is only slightly twisted and from above is essentially male in character, with two well developed stipes. Anteriorly, beneath and to the right of these, is what is evidently a short, aborted sting, without any part of its sheath.

The absence of either wings or tegulæ on the otherwise gynandromorphous thorax, the queer structure of the tip of the gaster which has both of the male secondary sexual appendages and in addition an imperfect sting, and the crossed nature of the sides are very different from the conditions in either of the previously known examples.